

1 ABSTRACT OF THE DISCLOSURE

2 In one implementation, a plasma etching process includes forming
3 a carbon containing material over a semiconductor substrate. The
4 carbon containing material is plasma etched from the substrate at a
5 temperature of at least 400°C using a hydrogen or oxygen containing
6 plasma. In one implementation, a plasma etching process includes
7 forming a masking layer over a substrate. The masking layer is
8 patterned to form openings therein. Material beneath the masking layer
9 is etched through the openings. After such etching, the masking layer
10 is removed from the substrate. After such removing and before
11 subsequently depositing any material over the substrate, the substrate is
12 plasma etched at a temperature of at least 400°C. In one
13 implementation, a semiconductor plasma etching process includes first
14 etching material from a substrate and forming an undesired residue at
15 least partially over the substrate during the first etching. After the first
16 etching and before subsequently depositing any material over the
17 substrate, the undesired residue is plasma etched from the substrate.
18 In one implementation, a chemical vapor deposition process of
19 depositing a material over a semiconductor substrate includes positioning
20 a semiconductor substrate within a plasma enhanced chemical vapor
21 deposition reactor. The substrate is plasma etched within the reactor
22 using a first gas chemistry. After the plasma etching, a material is
23 chemical vapor deposited over the semiconductor substrate within the
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reactor using a second gas chemistry without removing the substrate
from the reactor between the etching and the depositing.